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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/913,708	09/24/2001	Ralph Sperschneider	3219	2693

22862 7590 03/22/2007

GLENN PATENT GROUP
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EXAMINER
VO, HUYEN X

ART UNIT	PAPER NUMBER
2626	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/913,708	SPERSCHNEIDER ET AL.	
	Examiner	Art Unit	
	Huyen X. Vo	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12,14-17 and 19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12,14-17 and 19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 September 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's arguments filed 2/28/2007 have been fully considered but they are not persuasive. Nagai clearly teach a decoding system that reads received data in two opposite directions, forward and backward directions. Data read in the forward direction is considered the first set while data read in the backward direction is considered the second set, or vice versa. Figure 29 shows multiple points at which the data is read in both forward and backward directions on the basis of forward and backward decoding trees, respectively. The forward and backward decoding trees are considered predetermined assignment rules.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 12, 14-17, and 19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

4. Claims 12 and 19 are drawn to an apparatus and method for reading a data stream in two opposite directions simultaneously. In order for a claimed invention to be considered statutory under 35 U.S.C. 101, it must be useful and accomplish a **practical application**. That is, it must produce a "useful, concrete and tangible result" *(State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02)*. In the present case, the final

result of claims 12 and 19 only refers obtaining the at least one code word from the second set. As such, claims 12 and 19 are directed to non-statutory subject matter. The dependent claims fail to overcome the 35 U.S.C. 101 rejection directed towards independent claims 12 and 19, and thus, are also directed to non-statutory subject matter.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless – (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 12 and 14-16 and 19 are rejected under 35 U.S.C. 102(b) as being Nagai et al. by (US 5852469).

7. Regarding claims 12 and 19, Nagai et al. disclose an apparatus and method for reading a data stream which comprises a multitude of raster points as reference points, the raster points specifying a raster, two adjacent raster points defining a segment (*referring to figure 6 shows multiple segments having multiple raster points*), wherein the data stream comprises a plurality of sets of code words, a first set of code words being written in the first direction and a second set of code words being written in a second writing direction (*referring to figure 29, first code string is positioned in a forward direction while second code string is positioned in a backward direction*), the code

words of the second set being assigned to segments of the data stream in accordance with a predetermined assignment rule, such that each code word of a set is assigned to a different segment (*referring to figure 29*), wherein the a code word of the second set is distributed over more than one segment in accordance with a predetermined rule, the apparatus further comprising:

a first device reading in a first direction of reading which corresponds to the first direction of writing (*element 107 in figure 36 reads data in forward direction*);

a second device for reading in a second direction of reading which is opposite to the first direction of reading (*element 108 in figure 36 reads data in backward direction*); and

a control device:

for supplying the code words of the first set to the first reading device, each code word of the first set starting at the first raster point of a segment (*figure 6 shows a first and second code string with each written in opposite directions; each code string includes 2 raster points: starting and ending points; Forward decoder reads the first code string and decodes it in a forward direction using forward coding tree as discussed in col. 25, lines 31-43 and also referring to figure 36*), and

for supplying the code words of the second set to the second reading device, wherein one jumps to the second raster point of a segment in accordance with the predetermined assignment rule (*figure 29 shows a first and second code string with each written in opposite directions; each code string includes 2 raster*

points: starting and ending points; backward decoder reads the second code string and decodes it in a backward direction using backward coding tree as discussed in col. 25, lines 31-43 and also referring to figure 36; it is inherently for the system to jump to the second code string after it finished processing the first code string), and

wherein the control device is adapted for jumping at least to a further segment different from the segment, in which the part of the code word of the second set has been found, in accordance with the predetermined rule, when all segments have been searched for code words of the second set in accordance with the predetermined assignment rule and at only a part of the code word of the second set has been found in a segment and the code word of the second set is still not complete (*col. 25, line 44 to col. 26, line 34 and referring to figure 29 inherently suggests that the system of figure 36 would jump from one segment to another segment*), and

wherein the control device is adapted for obtaining the at least one code word of the second set completely or a further part of at least one code word of the second set from the further segment (*col. 25, line 44 to col. 26, line 34, determining errors and deciding if error is discarded or used*).

8. Regarding claim 14, Nagai et al. further disclose an apparatus as claimed in claim 12, wherein, if only one starting section of a code word is read by a writing device in one segment, this starting section is stored (*col. 25, line 31 to col. 26, line 33*).

9. Regarding claim 15, Nagai et al. further disclose the apparatus as claimed in claim 12, wherein the code words are Huffman code words (*col. 4, lines 1-20*).

10. Regarding claim 16, Nagai et al. further disclose the apparatus as claimed in claim 12, wherein the code words represent information symbols (*figures 6 and 9 represent information of some sort or referring to col. 26, lines 50-67*) and wherein code words of the first set represent more significant information symbols than code words of the second set or of further sets (*col. 19, lines 29-49*).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai et al. by (US 5852469).

13. Regarding claim 17, Nagai et al. fail to specifically disclose the apparatus as claimed in claim 16, wherein the information symbols are spectral values of an audio signal, and wherein the code words of the first set are spectral values which are

significant from a psycho-acoustic point of view and which are to be protected from error propagation due to a transmission error in the data stream. However, it would have been obvious to one of ordinary skill in the art at the time of invention to readily realize that the system of Nagai et al. can be applied to any information source including audio and image sources. The advantage of using the system of Nagai et al. to process an audio source would be to provide a high error-resistance system for processing audio signal to achieve audio quality when reconstructed.

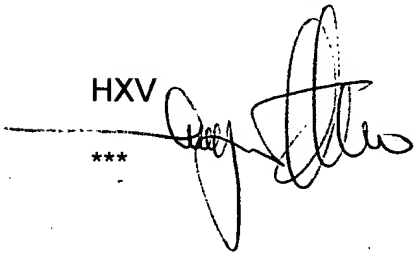
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen X. Vo whose telephone number is 571-272-7631. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on 571-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HXV



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3/10/2007